

*Amendments to the Claims*

1. (currently amended) A method of monitoring an integrated circuit chip, comprising:

(a) receiving ~~at least one~~ a digitized sense signal from the integrated circuit chip, ~~whereby~~ wherein the at least one digitized sense signal ~~represents~~ is a digital representation of a corresponding process-dependent circuit parameter within the integrated circuit chip; and

(b) determining an analog value for the ~~at least one~~ process-dependent circuit parameter ~~parameters~~ from the corresponding ~~at least one~~ digitized sense signal, [[;]] wherein the process-dependent circuit parameter is measured within a process monitor portion of the integrated circuit; and

(c) configuring ~~the at least one determined analog value is utilized to~~ ~~configure~~ an operational portion of the integrated circuit to account for the measured process-dependent parameter utilizing the determined analog value.

2. (currently amended) The method according to claim 1, wherein steps (a), ~~and (b), and (c)~~ are performed outside of the integrated circuit chip.

3. (currently amended) The method according to claim 1, wherein step (b) comprises retrieving the ~~at least one~~ analog value from a look-up table using the ~~at least one~~ digitized sense signal.

4. (currently amended) The method according to claim 1, wherein step (b) comprises calculating the ~~at least one~~ analog value from the ~~at least one~~ digitized sense signal.

5. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal represents a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip.

6. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal represents a transconductance parameter of a transistor fabricated on the integrated circuit chip.

7. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal represents a sheet resistance of a resistor fabricated on the integrated circuit chip.

8. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal represents a temperature of the integrated circuit chip.

9. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal represents a power supply voltage on the integrated circuit chip.

10. (currently amended) The method according to claim 1, wherein the ~~at least one~~ digitized sense signal includes a plurality of digitized sense signals representative of corresponding process-dependent parameters selected from the set of that represent a plurality of the following:

a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip;

a transconductance parameter of a transistor fabricated on the integrated circuit chip;

a sheet resistance of a resistor fabricated on the integrated circuit chip;

a temperature of the integrated circuit chip; and

a power supply voltage on the integrated circuit chip.

11. (currently amended) A system for monitoring an integrated circuit chip, comprising:

means for receiving ~~at least one~~ a digitized sense signal from the integrated circuit chip, ~~whereby~~ wherein the at least one digitized sense signal ~~represents~~ is a digital representation of a corresponding process-dependent circuit parameter within the integrated circuit chip; and

means for determining an analog value for the ~~at least one~~ process-dependent circuit parameter ~~parameters~~ from the corresponding ~~at least one~~ digitized sense signal, [[;]] wherein the process-dependent circuit parameter is measured within a process monitor portion of the integrated circuit; and

means for configuring ~~the at least one determined analog value is utilized to configure~~ an operational portion of the integrated circuit to account for the measured process-dependent parameter utilizing the determined analog value.

12. (original) The system according to claim 11, wherein the means for receiving and the means for determining are positioned external of the integrated circuit chip.

13. (currently amended) The system according to claim 11, wherein the means for determining comprises means for retrieving the ~~at least one~~ analog value from a look-up table using the ~~at least one~~ digitized sense signal.

14. (currently amended) The system according to claim 11, wherein the means for determining comprises means for calculating the ~~at least one~~ analog value from the ~~at least one~~ digitized sense signal.

15. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal represents a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip.

16. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal represents a transconductance parameter of a transistor fabricated on the integrated circuit chip.

17. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal represents a sheet resistance of a resistor fabricated on the integrated circuit chip.

18. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal represents a temperature of the integrated circuit chip.

19. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal represents a power supply voltage on the integrated circuit chip.

20. (currently amended) The system according to claim 11, wherein the ~~at least one~~ digitized sense signal includes a plurality of digitized sense signals representative of corresponding process-dependent parameters selected from the set of ~~that represent a plurality of the following:~~

a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip;

a transconductance parameter of a transistor fabricated on the integrated circuit chip;

a sheet resistance of a resistor fabricated on the integrated circuit chip;

a temperature of the integrated circuit chip; and

a power supply voltage on the integrated circuit chip.